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SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
SUITE 300
GARDEN CITY, NY 11530

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| EXAMINER |
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SMITH, PHILIP ROBERT

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| ART UNIT | PAPER NUMBER |
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3739

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| MAIL DATE | DELIVERY MODE |
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01/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/811,041

Applicant(s)

MATSUMOTO ET AL.

Examiner

Philip R. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

- [01] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- [02] Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (5,681,260) in view of Biglieri (6,958,577) and Nevo (6,594,517). Ueda discloses a capsule endoscope system comprising:
- [02a] a capsule endoscope ("capsule type endoscope 150," 18/8), of which movement is controlled by a magnetic field externally applied (via "guided part 159," 18/50);
- [02b] magnetic-field generating means ("magnetic force generating part 31," 18/45) for generating a magnetic field focused on one point to control the movement of the capsule endoscope traveling in a body cavity of a subject lying down on an examination table ("bed 10," 8/42-50); and
- [02c] moving means for moving ("magnetic force generating apparatus 11," 8/51-65) the magnetic-field generating means relative to the examination table.
- [02d] a magnetic-field generating member ("guided part 159," 18/50) is arranged in at least one portion of the capsule endoscope.
- [02e] position detecting means ("hall sensor unit 138" 18/41) for detecting position of the capsule endoscope; wherein the position detecting means detects the position of the capsule endoscope, and the moving means controls the movement of the examination table in a corresponding manner to the position of the capsule endoscope:

The controlling apparatus 12 comprises a motor driving circuit 133 driving said motors 37 and 38, a position detecting part 134 inputting the output of said hall sensor 131... (15/57-67);

The outputs of the hall sensor 131 in the respective positions will be determined. The position in which the output of this hole sensor is maximum will be determined as the position of tip forming part 19... After the position of the tip forming part 19 is thus detected, the insertable part 8 will be magnetically guided and will be further inserted into the object (16/18-44).

[03] Ueda does not disclose moving means for moving the examination table relative to the magnetic-field generating means.

[03a] Biglieri discloses the following in 5/23-30:

According to a further embodiment of FIG. 6, a magnetic structure may be provided which is displaced relative to the patient table, hence to the body under examination or the part thereof to a predetermined extent and in predetermined directions.

In this case, the magnetic structure 1 or the patient table 2, or both may be displaced relative to each other.

[03b] Biglieri demonstrates the equivalence of the claimed invention with the invention disclosed by Ueda. At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the examination table disclosed by Ueda could be moved relative to the magnetic-field generating means disclosed by Ueda, as opposed to the other way around. A skilled artisan may turn to this obvious and equivalent alternative if, for example, the magnets (due to their weight) are more difficult to move than the patient; or if the wires associated with an electromagnetic field-generating device are short or cumbersome.

[04] Ueda in view of Biglieri does not disclose that the magnetic field generating member ("guided part 159," as noted above) includes a plurality of magnetic coils arranged in the directions of three axes.

[04a] Nevo discloses a plurality of magnetic coils arranged in the directions of three axes, which perpendicularly intersect one another ("coils 22, 24, 26, as more particularly illustrated in FIG.

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1a, have axes of known orientation with respect to each other, which axes have components in the three orthogonal planes," 4/66-5/2).

[04b] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to substitute the "guided part 159" disclosed by Ueda with the orthogonal coils disclosed by Nevo. A skilled artisan would be motivated to do so in order to "enable more precise control of the position, direction and operation of the device" (4/5-7).

[04c] Nevo discloses that a current may be selectively supplied to at least one of the plurality of magnetic coils in a time series manner to control the movement of the capsule endoscope by the interaction thereof with the magnetic-field generating means: "the electrical currents through coils 22, 24, 26 may be controlled by the processing and control unit 10 to cause the torque generating module 20 to generate a resultant magnetic dipole interacting with the homogenous magnetic field produced by the MRI magnet 42 to produce a torque of the desired direction and magnitude, which is applied to the intra-body device 30, to steer it or to otherwise activate it" (5/4-11).

Additional Claim Rejections - 35 USC § 103

[05] Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (5,681,260) in view of Biglieri (6,958,577).

[06] Ueda discloses a capsule endoscope system comprising:

[06a] a capsule endoscope ("capsule type endoscope 150," 18/8), of which movement is controlled by a magnetic field externally applied (via "guided part 159," 18/50);

[06b] magnetic-field generating means ("magnetic force generating part 31," 18/45) for generating a magnetic field focused on one point to control the movement of the capsule endoscope

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traveling in a body cavity of a subject lying down on an examination table ("bed 10," 8/42-50);

and

[06c] moving means for moving ("magnetic force generating apparatus 11," 8/51-65) the magnetic-field generating means relative to the examination table;

[06d] a magnetic-field generating member ("guided part 159," 23/18) arranged in at least one portion of the capsule endoscope, wherein the magnetic-field generating member includes at least one magnetic coil (23/17), the magnetic-field generating means is controlled such that a magnetic field is intermittently applied (34/66-35/16);

[06e] that the magnetic field may be intermittently applied as a pulse signal (see Figure 44 with reference to 25/1-6); and

[06f] the position of the capsule endoscope is detected by the magnetic field generating member. ("By detecting the position of the guided part 159 with the hall sensor 131, the position of the capsule type endoscope 150 is detected," 18/43-51); the invention of Ueda is capable of position sensing when the magnetic field is not applied.

[07] Ueda does not disclose moving means for moving the examination table relative to the magnetic-field generating means.

[07a] Biglieri discloses the following in 5/23-30:

According to a further embodiment of FIG. 6, a magnetic structure may be provided which is displaced relative to the patient table, hence to the body under examination or the part thereof to a predetermined extent and in predetermined directions.

In this case, the magnetic structure 1 or the patient table 2, or both may be displaced relative to each other.

[07b] Biglieri demonstrates the equivalence of the claimed invention with the invention disclosed by Ueda. At the time of the invention, it would have been obvious to a person of ordinary skill in

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the art that the examination table disclosed by Ueda could be moved relative to the magnetic-field generating means disclosed by Ueda, as opposed to the other way around. A skilled artisan may turn to this obvious and equivalent alternative if, for example, the magnets (due to their weight) are more difficult to move than the patient; or if the wires associated with an electromagnetic field-generating device are short or cumbersome.

Response to Arguments

- [08] Applicant's arguments filed 10/25/2007 have been fully considered but they are not persuasive.
- [09] With regard to claim 1, Applicant contends that the cited references do not disclose a position detecting means, wherein the moving means controls the movement of the examination table in a corresponding manner to the position of the capsule endoscope. As noted above, Ueda discloses such an arrangement.
- [10] With regard to claim 8, Applicant contends that Ueda "is not designed to apply a magnetic field as a pulse signal, so as to move or supply power to the capsule endoscope when the pulse signal is applied, and to detect the endoscope position when the pulse signal is not applied, as in the capsule endoscope system of claim 8". It is maintained that Ueda is inherently capable of applying a pulse signal, which in the case of a claim to an apparatus, is sufficient. Furthermore, Ueda explicitly recommends pulse signals for the purpose of allowing broadcast of images from the capsule endoscope (as noted above).

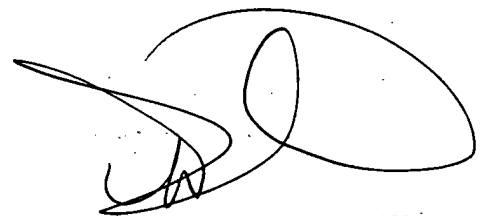
Conclusion

- [11] **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
- [12] A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

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of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

- [13] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip R. Smith whose telephone number is (571) 272 6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm.
- [14] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272 4764.
- [15] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LINDA C. M. DVORAK
SUPERVISORY PATENT EXAMINER
GROUP 3700